WHAT MATTERS - A PKAL ESSAY

INVESTING IN FACULTY: THE ROLE OF LEADERS

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Identifying and supporting gifted individuals— a few people who really want to accomplish something— is a key to overcoming barriers and achieving meaningful reform.

— Bruce Alberts, President of the National Academy of Sciences. PKAL Symposium 1994.

Investing in faculty, making key decisions about hiring, socializing, evaluating and rewarding faculty, is a central responsibility of STEM leaders. To fulfill this responsibility, leaders of departments and programs should know the career trajectory of each faculty member with whom they work and how that personal trajectory fits into broader plans for the future.

Leaders should also know how current and emerging clusters of excellence within the faculty advance those plans, as well as what new expertise and experience must be brought into the faculty cadre.

Attention on many campuses is given to faculty at the time of appointment, with serious conversations about establishing a career, about building a community of colleagues with whom they can engage in research and pedagogical explorations for years to come.

Yet today, in a time when "the ways that scientists communicate, interact and collaborate are undergoing rapid and traumatic transformations which are driven by the accessibility of vast computing power" (*Bio2010*) and when the dissolving of boundaries between disciplines offer new opportunities for research and for transforming the learning environment, faculty at all career stages need the challenge of stepping back, visiting, and revisiting career objectives.

Each person, with the advice and counsel of colleagues, should determine periodically how to use resources available to him or her:

- time
- departmental experience
- grants officers
- students
- academic calendar
- colleagues
- and institutional context to their best advantage.

Those in positions of leadership, formal or informal, should help make this happen. Need for attention to the quality and character of faculty in the context of transforming undergraduate programs is a persisting challenge; none of this is new.

KEY POINTS

- Know the career trajectory of each faculty member.
- Know what new expertise and experience must be brought into the faculty cadre.
- Challenge faculty at all career stages to step back, visit, and revisit career objectives.

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Here is what the authors of a 1982 report from the National Research Council said in the context of exploring "science for the non-specialist."

"The key to eliminating the barriers that prevent colleges and university from reaching their full potential in teaching non-specialists is human ingenuity and dedication.

Faculty at all career stages need the challenge of stepping back, visiting, and revisiting career objectives.

To put it succinctly, we must attract highly motivated and talented teachers to meet the challenge of educating non-majors about science and then provide them with the means of fulfilling their calling.

This requires a number of conditions be met:

- 1st— there must be an appealing incentive for taking on and achieving the task
- 2nd— these quality teachers must be guaranteed adequate time with students to fulfill their curricular goals
- 3rd— there must be an adequate vehicle in the form of courses for executing the teaching mission
- 4th— the faculty should be provided a forum for brain-storming curricular ideas with science colleagues as well as with leaders in the professions
- 5th— those professors taking on the task must have appropriate teaching tools (including information technologies)
- 6th— there needs to be a national support system to help provide leadership and disseminate model course materials and innovative ideas about teaching non-majors."

— Harrison G. Gray, etal. *Science for Non-specialists: The College Years*. National Research Council, 1982. ■